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# **Is Environmental Concern in Advertising Related to the State of the Economy? An Exploratory Study from the Wall Street Journal 2007-2011**

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## **ABSTRACT**

*This study is an attempt to determine the relationship between the prevalence of environmental cues in advertisements and the state of the U.S. economy. Advertisements sampled from the Wall Street Journal, a preeminent daily business news publication in the United States, were examined during the years 2007, 2009, and 2011 to determine this relationship. While few direct environmental appeals were found within the sample of advertisements, a variety of indirect environmental cues were utilized for analysis. The results show that there is a quadratic relationship between advertisers' use of indirect environmental cues and the state of the economy, such that the presence of these cues drops in frequency during the year 2009 and begins to return to pre-recession levels in 2011. What this suggests is that the presence of these cues declined as the Great Recession worsened and then began to increase as the economy began to recover. Potential interpretations are offered.*

## **INTRODUCTION**

Researchers have long wondered whether concern for the environment is influenced by a population's relative wealth and stage of economic development. If it is, one place it might show up is in advertising. In other words, when times are good, people have the luxury of being concerned about the environment. When times are not so good, there may be less concern about the environment. Advertisers, in the design of their promotional campaigns, might consciously or unconsciously reflect the corresponding concern of their target markets within the themes and cues employed in their promotional execution. To examine this relationship, advertisements were sampled from the Wall Street Journal, a preeminent business news publication in the United States, during the years 2007, 2009, and 2011.

*Concern for the Environment Related to Economic Conditions*

Between the years 2000 and 2009, national polls conducted by the Gallup organization revealed that more Americans were willing to give ecological concerns priority over economic concerns. In 2009, a shift occurred and a majority of respondents indicated concern for the economy as being more important “even if the environment suffers to some extent.” In 2013, the numbers were close with 48% prioritizing the economy and 43% prioritizing the environment (Saad, 2013). In the three years included in our study, the following pattern emerged:

**Table 1: Prioritized Concern of U.S. Public**

<u>Prioritized Concern</u>	<u>2007</u>	<u>2009</u>	<u>2011</u>
Environment	55	42	36
Economy	37	51	54

(Data from Gallup as reported in Saad 2013)

This data indicates that even though the US economy began to experience a modest rebound in 2011 as compared to the average for the prior year, support for the environment was slower to rebound (and still has not recovered even after three years of sluggish growth leading into 2013). Scruggs and Benegal (2012), using more than 30 years of public data concerning global warming, find a similar pattern. In this case, the general decline seen recently in the belief in the severity of the problem of global warming is “most likely driven by the economic insecurity caused by the Great Recession.” The Pew Research Center released its annual policy priorities survey on January 24, 2013 and it revealed that although “protecting the environment” increased from 41% (in 2009) to 52% (in 2013) as a top priority for government action, it still ranks 12<sup>th</sup> on the list of potential priorities. In the same poll, “dealing with global warming” ranked last out of 21 potential issues. Concern for the natural environment is likely rebounding as evidenced by the number of organizations, primarily not-for-profits, dedicated to this cause, as well as stories carried by the media. In the *Wall Street Journal*, for example, in 2009, there were 369 instances of the presence of the word “green” in articles, while in 2011, there were 1649. In 2009, there were 234 mentions of the word “environmental,” while in 2011, there were 912. (2007 data are not available via electronic search.)

Corporate interest in environmental concerns is a multifaceted phenomenon. On one hand, corporations are interested in protecting and sustaining the natural environment because it is simply the right and moral thing to do, and it is in the best interest of humanity. On the other hand, corporations are also interested in protecting the natural environment because it is what their customers (and perhaps the media) want them to do; and it helps sales and generates goodwill if a corporation is perceived to care about the environment. For either reason, corporations have an incentive to share with their public an interest in and concern for the natural environment, hence, corporate advertising and promotion is the marketing tool used to spread this message. Even so, interest in protecting the natural environment, for many, seems to be viewed as a luxury reserved for

when times are good and profits are high. This paper is an attempt to describe the nature of this relationship between economic security and fluctuations in the use of environmental cues in advertising.

### *What Customers are willing to Pay for Green*

An article in Advertising Age in 2012 reported that even though green products continue to sell well, a survey of 2,000 U.S. consumers conducted by research firm GfK found “five to twelve point drops in the percentage of consumers willing to pay more” for a variety of eco-friendly products. In that same article, some of the fault is placed with “over-hyping green products and making overly aggressive claims.” Diane Crispell, a director at GfK states, “you have this kind of heightened distrust...with green and health claims.”

Skepticism about claims is becoming a problem, as is the notion that green products might not work as well as regular products. Albayrak, Caber, Moutinho, and Herstein (2011) find that consumer skepticism about the true intent of companies employing environmental messages reduces green purchases behaviors. Chang (2011) finds that among consumers who demonstrate ambivalence toward green products, this ambivalence is due to negative perceptions such as skepticism about claims, the perception that green products are higher priced, and the perception that green products are of lesser quality. Luchs, Walker, Naylor, Irwin, and Raghunathan (2010) coin a new phrase, the “sustainability liability,” as they find that some consumers associate sustainable products with gentleness and lower strength and consequently, sometimes prefer to purchase non-sustainable products when strength of product is a desired characteristic.

Media research firm GfK released the results of the GfK MRI Survey of the American Consumer in 2012 which found that only “31% of adults purchased environmentally friendly or green household products in the last 12 months.” They go on to state that over the last five years consumers are “less likely to pay more or give up convenience for green products.” Those willing to give up convenience declined from 56% in 2007 to 47% in 2011. Those willing to pay more for a green product declined from 60% to 52% in the same time frame (GfK MRI 2012). The percentage of consumers willing to sacrifice for green products remains high but has fallen during the recession. Anne Marie Kelly, EVP of Marketing and Strategic Planning at GfK MRI states that “It seems that perhaps many people’s worries have shifted to their own needs versus those of the greater good—not uncommon during an economic crisis when livelihoods have been compromised or threatened.” (Press Release from GfK MRI, 2012) Evidence of this trend comes from non-US markets as well. Highly educated self-identified ecology minded consumers in India are more likely to buy green products but few are inclined to pay much of a premium for such products. More than 80% report that they would only pay less than a 10% premium for “eco-friendly” products (Ishaswini and Datta, 2011).

These factors place advertisers in a bind. Consumers still care about the environment yet are unwilling to pay extra during economic hard times. In addition, there is increasing consumer skepticism of “green” claims/appeals. Together, these

factors may have pushed advertisers to use more of an indirect approach to convey environmental concern.

### *Previous Literature Concerning Green Themes in Advertising*

Surprisingly, given all the attention paid to measuring environmental concerns of the public in the media, very little has been written about the prevalence of environmental themes in advertising. Furthermore, no studies were found where the media in question was a general business publication, and none looked at the impact of the most recent recession.

Lill, Gross, and Peterson (1986) used content analysis to measure the use of social-responsibility themes in magazines over the years 1967 to 1984, looking specifically at 5 years during that span. The incidence of ads with an “ecology or physical environment socially responsible theme” ranged from 1.9% in 1967 to 2.9% in 1984. The high was in 1975 with 3.9%. Peterson (1991) examined the presence of ads with environmental themes in television advertisements in the years 1979 and 1989 and found that most of the ads involved indirect environmental content, meaning that the ad was not directly related to the marketing objective of the sponsor but rather was used to send an environmental message for the common good. Wagner and Hansen (2002) analyzed ads that appeared in nine journals with a connection to forest products. They classified the ads into eight potential categories that varied the degree of “greenness” from “brown” to “extra green.” Of particular interest to our study, the “light green” category must meet at least one of the following criteria: present pictures of “plants or animals, natural landscapes, or children,” should make “extensive use of the color green” and/or have a headline that is “referring to an environmental fact or promise.” Grillo, Tokarczyk, and Hansen (2008) replicated this study using the same analytical framework.

Peterson (2005) examined the presence of ecological themes in magazine advertisements directed at children in the years 1987, 1997, and 2002. This study reported an overall increase in the number of ads of this type over the 15 years included in the study, particularly among direct ads, whose ecology theme was related to the product being marketed. Peterson (1991, 2005) found that larger firms sponsored more ecology themed ads than smaller ones as a percentage of all ads placed by firms of that type.

### **Methodology**

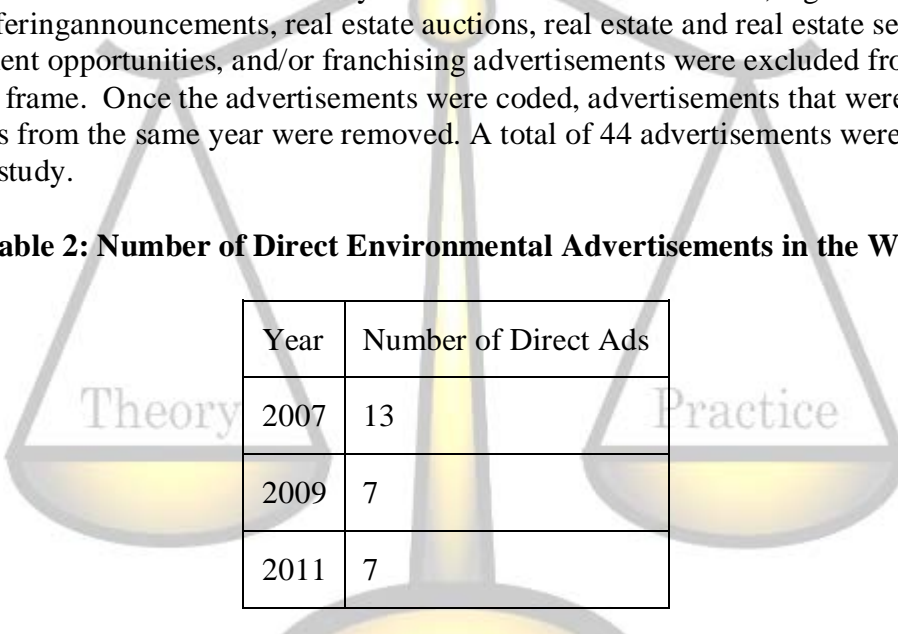
This study employs content analysis to examine ads in the Wall Street Journal during the years 2007, 2009 and 2011. Only the first three sections of the publication (Main Section, Marketing Section, and Financial Section) were included in the sampling frame as these are the sections that consistently appear on a Monday to Friday basis and exclude special sections which exhibit wide variation in focus. All ads that appeared in these three sections, 1/12 of a page or larger (up to two page spreads) were included. Ads were drawn from one daily edition from the first week of each month of the years under review. Days of the week were rotated to ensure that all days were included (January used Monday, February Tuesday, and so on). If the day of the week needed from the first



full week was a missing issue due to a holiday or other reason, the same day of the week from the following week was chosen.

A coding guide was created to enable this analysis. A modified version of the coding scheme used by Wagner and Hansen (2002) was employed to code the ads. In this current study, both direct and indirect environmental messages in the advertisements were examined. Direct ads had an explicitly stated environmental theme. A direct advertisement had to have a direct relation to a company being green, concern for sustainability, or any direct mention of environmental awareness other than in the name or slogan. The headlines, body copy, and artwork of the advertisement were observed for direct mentions. The term “indirect” was used to describe ads that had environment related cues. An indirect advertisement is one that has some depiction of something from nature appearing in the visual layout of the ad. This would include scenes of plants, animals, streams, lakes or water, natural landscapes, or sky (for sky to be included, it had to either be a prominent feature of the ad and/or include clouds). Pools and other man-made structures were excluded as they are unnatural. Dow Jones ads, legal notices, public offering announcements, real estate auctions, real estate and real estate services, employment opportunities, and/or franchising advertisements were excluded from the sampling frame. Once the advertisements were coded, advertisements that were duplicates from the same year were removed. A total of 44 advertisements were removed from the study.

**Table 2: Number of Direct Environmental Advertisements in the WSJ**



Year	Number of Direct Ads
2007	13
2009	7
2011	7

Table 3 shows that despite a clear decline during the recession, the number of direct environmental advertisements was too small to allow for meaningful analysis of differences across years. Of 888 non-duplicated ads examined for this study, only 27 (about 3%) had a direct mention of an environmental theme. Focusing instead on indirect ad cues provided a sample large enough to produce statistically relevant interpretation. As mentioned previously, it may be that advertisers are more willing to appeal to environmental concerns through the use of indirect visuals to avoid consumer skepticism regarding environmental claims.

## Analysis

Over the three years of *Wall Street Journal* advertisements, 932 advertisements were analyzed. All duplicated advertisements were removed from the study (n=44) leaving a total of 888 advertisements. Broken down by year, this left 349 advertisements

from 2007, 248 advertisements from 2009, and 291 advertisements from 2011. Simple slope analysis revealed a non-linear quadratic relationship ( $p = .005$ ) between year of publication and the percentage of advertisements depicting an outdoor component (waterscape, landscape, skyscape, or focused outdoor object), indicating a decrease during 2009 and a return towards 2007 levels in 2011.

Out of the total 888 advertisements analyzed, 14% of the advertisements had an indirect environmental component. Out of the 349 advertisements in 2007, 17.8% ( $n=62$ ) had indirect environmental elements, while advertisements from 2009 contained 8.5% ( $n=21$ ) and advertisements from 2011 had 15.5% ( $n=45$ ). Analysis of Variance was run to determine that these differences are significant at the 0.005 level.

An analysis of the interaction followed. Pairwise comparisons yielded a significant difference between environmental elements depicted in 2007 and 2009 ( $p=0.001$ ) while the differences between 2007 and 2011 were not significant. The interactions between 2009 and 2011 were also found to be significant ( $p= 0.021$ ).

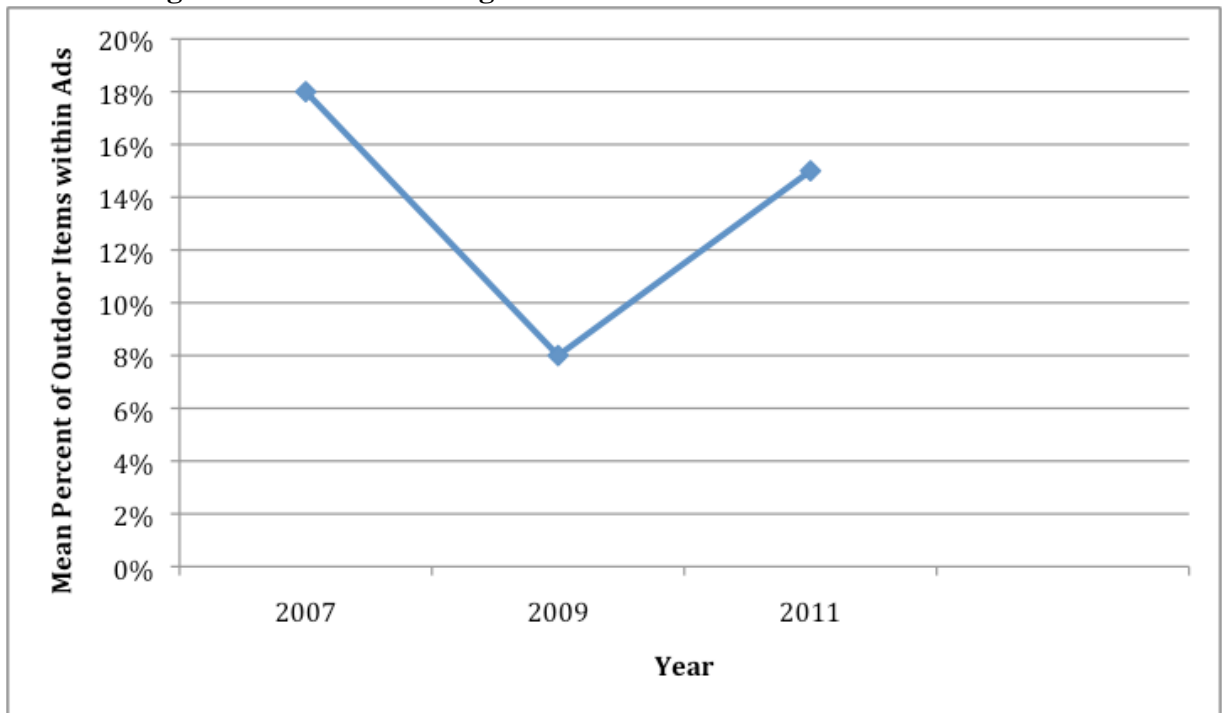
**Table 3: DV Outdoor Elements within Advertisements**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1.301 <sup>a</sup>	2	.650	5.318	.005	.012
Intercept	16.824	1	16.824	137.548	.000	.135
Year (IV)	1.301	2	.650	5.318	.005	.012
Error	108.249	885	.122			
Total	128.000	888				
Corrected Total	109.550	887				

**Table 4: Pairwise Comparisons**

Year (IV)	Std. Error	Sig. <sup>a</sup>
2007 2009	.029	.001
2007 2011	.028	.407
2009 2007	.028	.001
2009 2011	.030	.021
2011 2007	.028	.407
2011 2009	.030	.021

**Figure 1: Estimated Marginal Means of Outdoor Indirect Items**



### **Discussion & Managerial Implications**

The results show that there is a relationship between advertisers' use of indirect environmental cues and the state of the economy. What this suggests is that the presence of these cues declined as the Great Recession worsened and then began to increase as the economy began to recover.

This study suggests that advertisers use indirect environmental images to appeal to consumers and perhaps to "prime" environmentally aware consumers toward a preference for their product using outdoor cues at points in time that strategically match with consumer interests and concern. Advertisers are keenly aware that despite the fact that environmental concern wanes during a recession, U.S. consumers remain environmentally aware and may respond on a subconscious level to these cues. It may also be that in the face of consumer skepticism about green claims, green product performance, and true corporate environmental intent, advertisers have intentionally shifted from direct environmental themes to subtle indirect outdoor cues. This is fertile ground for future study.

One possible explanation of the result of this study is that it reinforces the notion that consumers feel that environmental concern is somewhat of a luxury. In difficult economic times, consumer willingness to pay more for environmentally friendly products declines, hence the value of indirect environmental cues as an advertising tool also declines. The presence of indirect environmental themes in advertising reflects the evolving level of environmental concern exhibited by consumers.

### **Directions for Future Research and Limitations**



There are several different routes that could be taken to expand upon this research. As seen below in the chart from our 888 advertisements we used in this study, only 27 advertisements contained a direct environmental message. This is not a large enough sample to determine if our expectations from the indirect advertisements follow in the direct environmental advertisements. The sample size should be increased in order to find more direct environmental themes and to examine the relationship between the state of the economy and the presence of environmental themes.

It would also be interesting to repeat this study in another business medium, for example *Fortune Magazine* to see if similar patterns are found. In addition, it would be beneficial to expand this research to popular magazines like *People Magazine* and fashion magazines like *Vogue* to see if these mediums also follow the pattern found through this research with indirect environmental cues. One limitation of this study is that everything came from one source; all the advertisements came from the *Wall Street Journal*.

## REFERENCES

- Albayrak, T., Caber, M., Moutinho, L. and R. Herstein (2011), "The Influence of Skepticism on Green Purchase Behavior," *International Journal of Business and Social Science* 2 (13), 189-197.
- "As More Marketers Go Green, Fewer Consumers Willing to Pay For It." *Advertising Age* 23 Sep. 2012.
- Chang, C. (2011), "Feeling Ambivalent About Going Green," *Journal of Advertising*, 40 (4), 19-31.
- Drozdenko, R., Jensen, M. and Coelho, D. (2011), "Pricing of Green Products: Premiums Paid, Consumer Characteristics and Incentives," *International Journal of Business Marketing and Decision Sciences*, 4(1), 106-116.
- "Enthusiasm for Environmentally Safe Products on the Wane." GfK MRI Press Release 4 Apr. 2012: Print.
- Grillo, N., Tokarczyk, J. and Hansen, E. (2008), "Green Advertising Developments in the US Forest Sector: A Follow Up," *Forest Products Journal*, 58 (5), 40-46.
- Ishaswini and Datta, S.K. (2011), "Pro-environmental Concern Influencing Green Buying: A Study on Indian Consumers." *International Journal of Business and Management*, 6 (6), 124-133.
- Lill, D., Gross, C. and Peterson, R. (1986), "The Inclusion of Social-Responsibility Themes by Magazine Advertisers: A Longitudinal Study," *Journal of Advertising*, 15 (2), 35-41.

Luchs, M.G., Naylor, R.W., Irwin, J.R. and Raghunathan, R. (2010), "The Sustainability Liability: Potential Negative Effects of Ethicality on Product Preference," *Journal of Marketing*, 74, 18-31.

Peterson, R.T. (1989) "Physical Environment Television Advertisement Themes," *Journal of Business Ethics*, 221-228.

Peterson, R.T. (2005), "Employment of Ecology Themes in Magazine Advertisements Directed to Children: A Longitudinal Analysis." *Journal of Promotion Management*, 11 (2), 195-215.

Pew Research Center. "Climate Change: Key Data Points from Pew Research." *Annual Policy Priorities Survey* 7 Feb. 2013.

Saad, L. (2013), "More Americans Still Prioritize Economy Over Environment." *Gallup* 3 Apr. 2013.

Scruggs, L., and Benegal, S. (2012), "Declining Public Concern About Climate Change: Can We Blame the Great Recession?" *Global Environmental Change*.

Wagner, E.R., and Hansen, E.H. (2002) "Methodology for Evaluating Green Advertising of Forest Products in the United States: A Content Analysis." *Forest Products Journal*, 52 (4), 17-23.

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